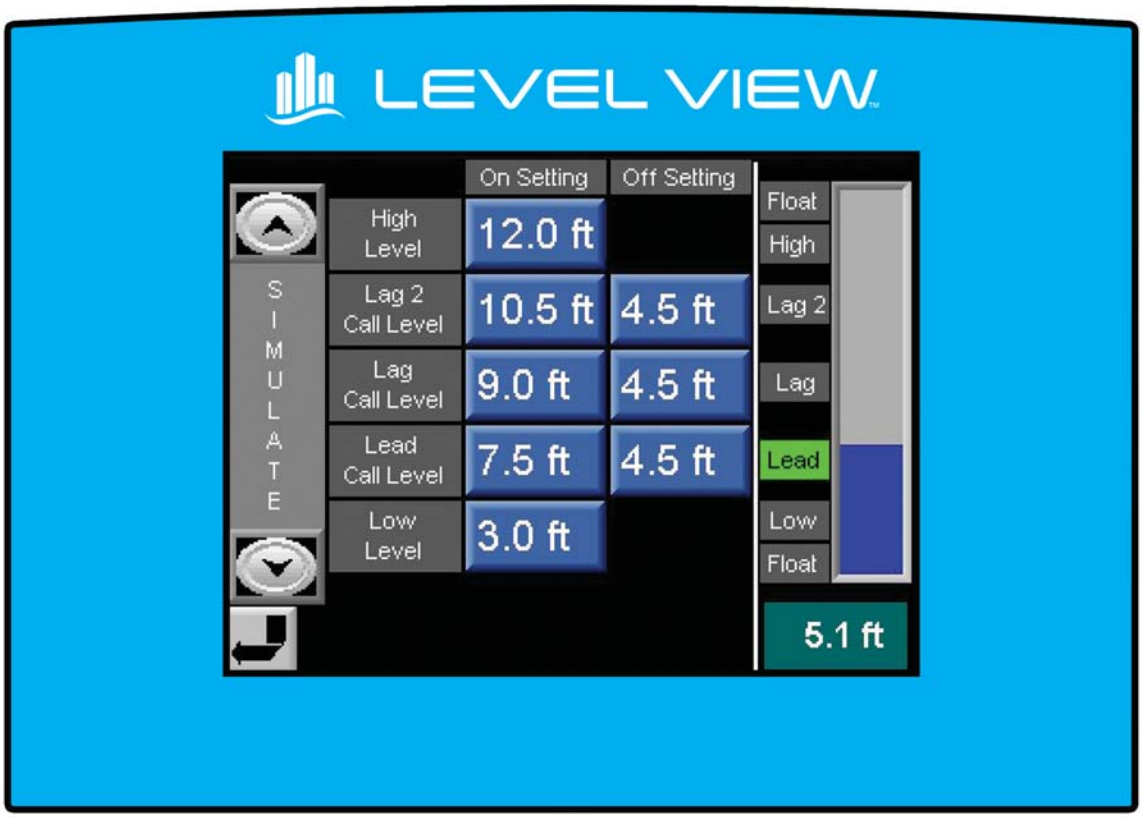
LEVEL VIEW™

PUMP STATION CONTROLLER



PRIMEX
MUNICIPAL AND INDUSTRIAL WATER CONTROL SOLUTIONS
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WARNINGS

Failure to read and understand the information provided in this manual may result in personal injury or death, damage to the product or product failure. Please read each section in its entirety and be sure you understand the information provided in the section and related sections before attempting any of the procedures or operations given.

Failure to follow these precautions could result in serious injury or death. Keep these instructions with warranty after installation. This product must be installed in accordance with National Electrical Code, ANSI/NFPA 70 so as to prevent moisture from entering or accumulating within the controller housing.

⚠WARNING

ELECTRICAL SHOCK HAZARD

A qualified service person must install and service this product according to applicable codes and electrical schematics. Disconnect power prior to servicing any equipment with the Level View™ controller.

- Do not connect power to this equipment if it has been damaged or has any missing parts.
- The Level View™ contains no serviceable parts; do not attempt to repair this equipment.
- Do not install in areas with: excessive or conductive dust, corrosive or flammable gas, moisture or rain, excessive head, regular impact shocks, or excessive vibration.

⚠WARNING

EXPLOSION OR FIRE HAZARD

Do not use this product with flammable liquids. Do not install in hazardous locations as defined by National Electrical Code, ANSI/NFPA 70.

INTRODUCTION & SPECIFICATIONS

Congratulations, and thank you for your purchase of the Level View™ controller. This manual explains the features and operations of the Level View™ controller which was designed specifically for pump stations. It can be configured for pump up or pump down applications. It uses a level transducer with two (2) back up float switches.

GENERAL

Duplex or triplex pump controller
Pump up or pump down
4-20mA level transducer with 2 back up floats (High + low) (external of controller)
Pump amps monitoring with current transducer
Pump flow monitoring
Pump HOA selector switch in AUTO monitoring
Pump fault monitoring
Power loss monitoring
Color touch display with easy navigation and intuitive setup
Display resolution: 320 X 240 (QVGA)
Colors: 65,536
Display viewing area: 5.7”

CONTROLLER FEATURES

Level/flow monitoring
Pump level in feet + bar graph
Pump GPM (Using volumetric calculation with level transducer)

PUMP CONTROL AND PROTECTION

Automatic pump alternation
Alternation can be forced to start a particular pump first every time
Pump dry run protection (based on motor amps + timer) with current transducer
Pump run indication
Pump Amp indication (with current transducer)
Constant or variable speed

SYSTEM

24hrs data log + 7 days of historical data
- Gallons pumped for each pump
- Number of starts for each pump
- Run time for each pump

Real time clock
Password protection (single level)
Alarm log
Level simulation

ELECTRICAL SPECIFICATIONS

Dedicated I/Os (see I/O table)
- 18 digital inputs
- 15 relay outputs (250 VAC, 3A Max.)
- 4 analog inputs (4-20mA, 14 bit resolution)
- 4 analog inputs (4-20mA, 12 bit resolution)

Power
- 24 VDC (20.4 - 28.8 VDC)
- 270 mA@24 V + 130mA for I/O = 400mA max
- Optional battery backup

ENVIRONMENT

Operational temperature 0 to 50ºC (32 to 122ºF)
Storage temperature -20 to 60ºC (-4 to 140ºF)
Relative Humidity (RH) 5% to 95% (non-condensing)

COMMUNICATION

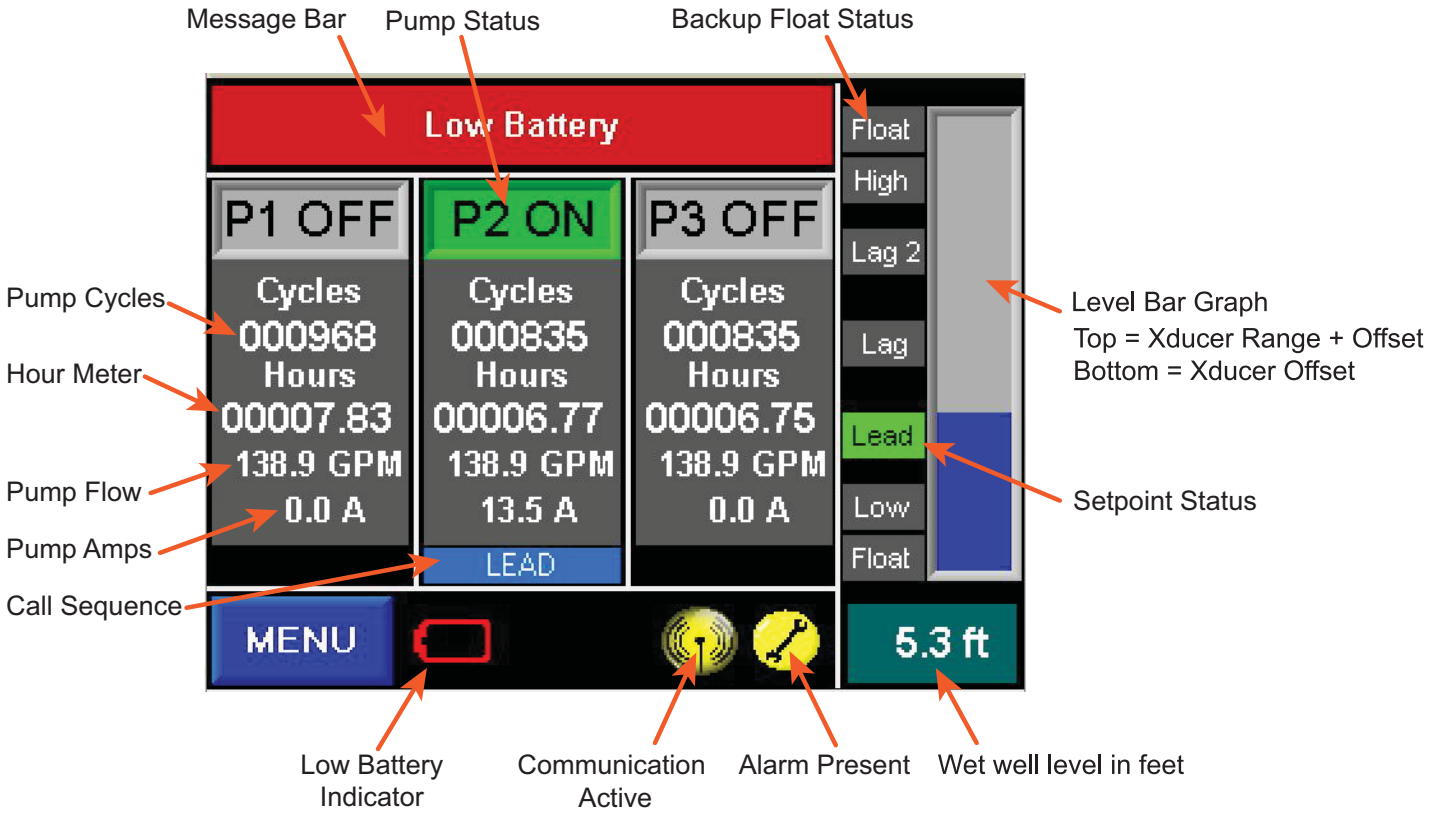
SCADA compatible
Serial port: RS 485 Modbus RTU slave
Optional cellular remote monitoring (PRIMEX™ PUMP WATCH™)
Optional Ethernet card

CERTIFICATION

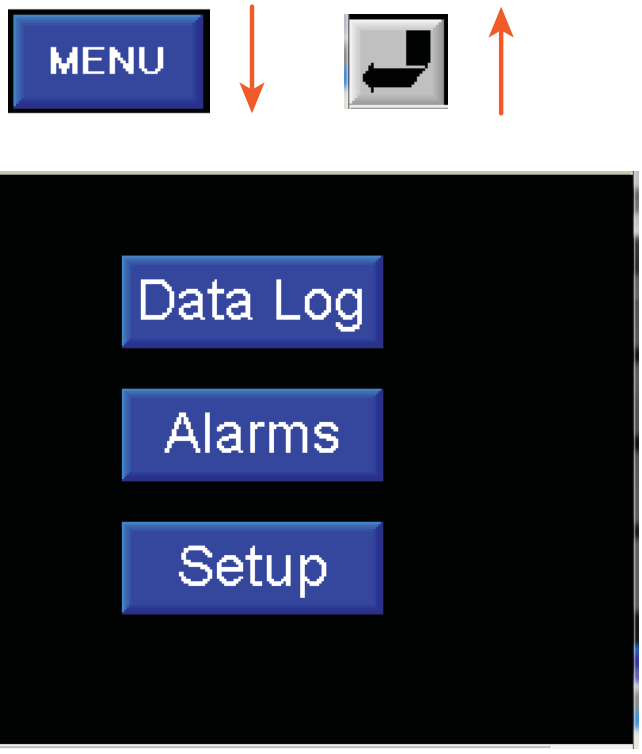
UL / cUL /CE listed

MAIN SCREEN

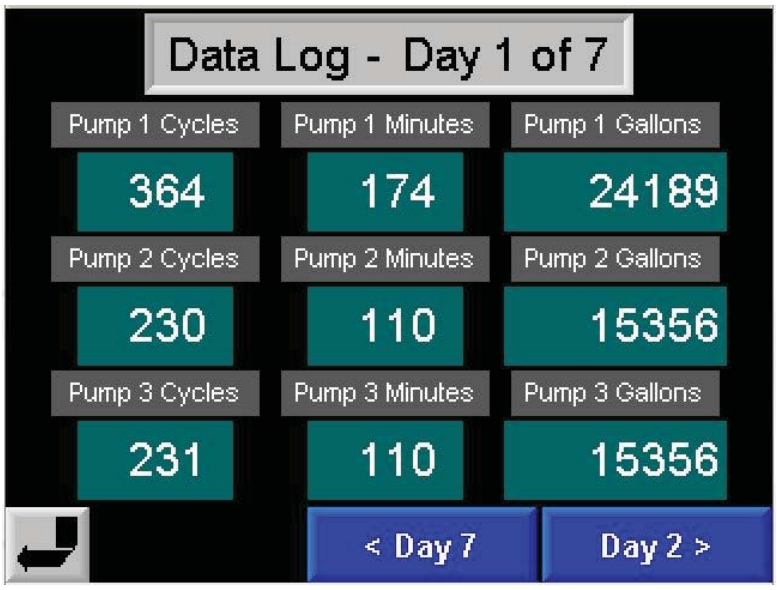
The **Main** screen gives the operator an overview of the lift station status.



ACCESSING THE MENU SCREEN

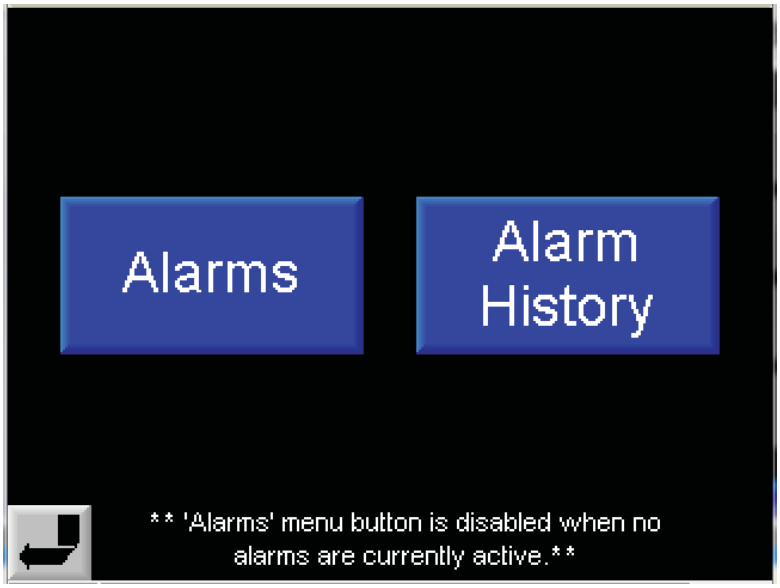


DATA LOG



The Level View™ controller will log daily station data for 7 days including today's data since midnight.
Pump 1, Pump 2, & Pump 3 cycles/day, runtime/day, gallons/day are recorded.
Day 1 through Day 7 can be accessed by using the navigation buttons.
Day 1 represents the data logged today since 0:00 (midnight).
Day 2 through Day 7 each holds values accumulated in a 24 hour period (midnight to midnight)

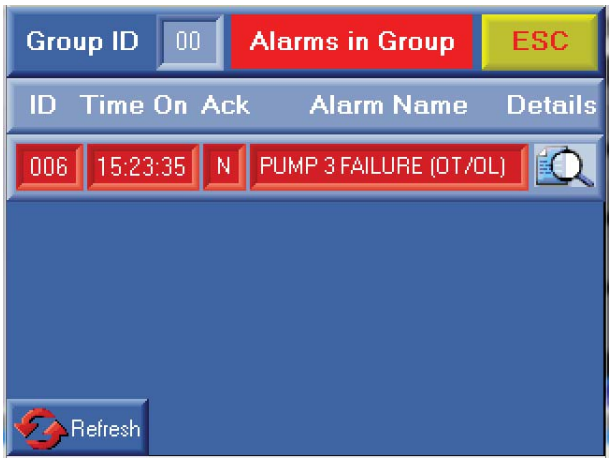
ALARMS



If the **Alarms** button is touched, the **Pending Alarms** screen will be opened, letting you see any currently active alarms. If the **Alarm History** button is touched, the **Alarm History** screen will be opened.

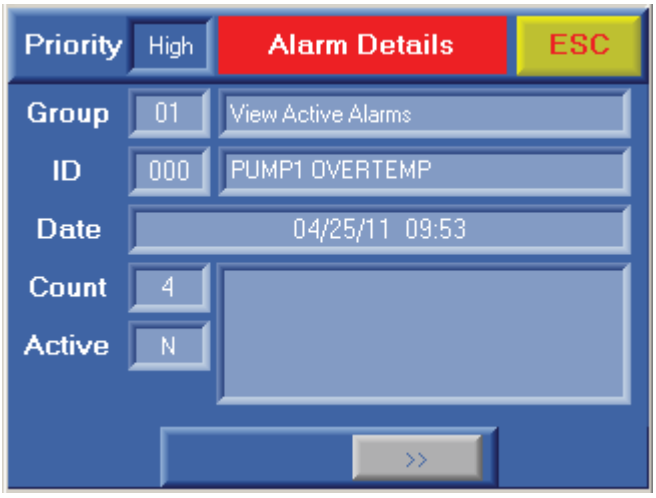
ACTIVE ALARMS

This screen will display the total number of active alarms. By pressing the magnifying glass, the details of any active alarm can be displayed. To return to the **Active Alarms** screen, press the **ESC** button.



This screen will display the alarms that have occurred. Pressing the **Refresh** button will only display active alarms. **Time On** indicates the time the alarm occurred.

If you touch the magnifying glass, the details of any active alarm will be displayed. To return to the **Pending Alarm** screen, press the **ESC** button.



ALARM HISTORY

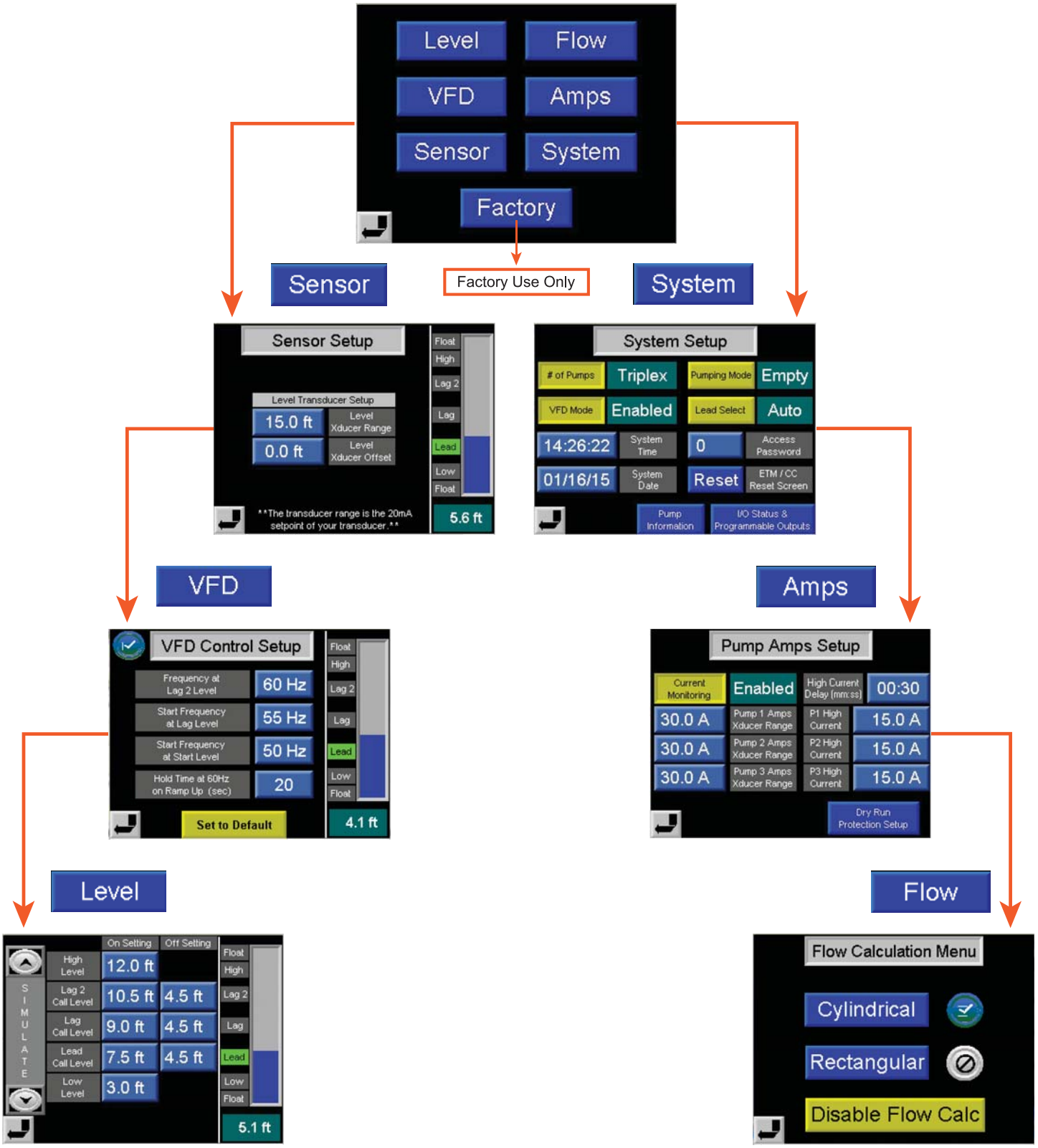
The Alarm History screen shows the most recent alarm, along with: when it occurred, when it returned to normal, the duration of the event, and when it was reset. Use the << button to look at the second most recent. The << and >> keys can be used to scroll through all of the alarms stored in the **Alarm History** log. To return to the **Alarm** menu, touch the **ESC** button.

Time and date of alarm occurrence & deactivation + duration

Possible alarms include:

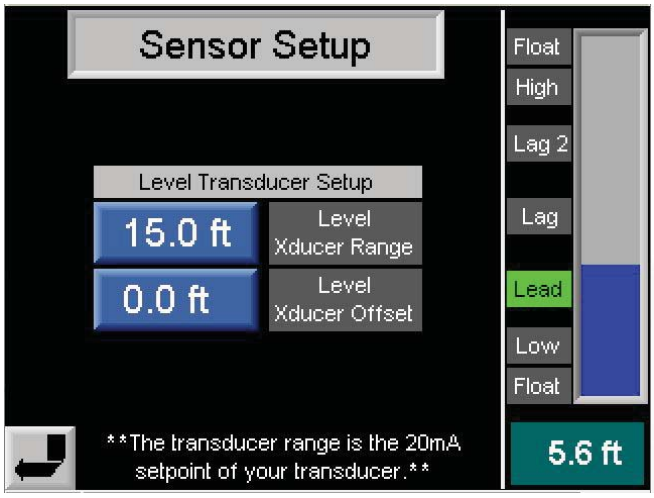
#	DISPLAY	DEFINITION	FIX
0	**LOW LEVEL XDCR**	Level in the wet well has fallen below the Low Level Set point	Check wet well & check transducer
1	**HIGH LEVEL XDCR**	Level in the wet well has exceeded the High Level Set point	Check pump operation, check in-flow, check level transducer
2	**LOW LEVEL FLOAT**	Low level float is OFF (down)	Check float & check transducer
3	**HIGH LEVEL FLOAT**	High level float is ON (up)	Check pumps operation, check in-flow, check level transducer
4	**P1 FAILURE (OT/OL)**	Pump 1 Overload trip or Over Temp trip	Check voltage, pump clogging or wear
5	**P2 FAILURE (OT/OL)**	Pump 2 Overload trip or Over Temp trip	Check voltage, pump clogging or wear
6	**P3 FAILURE (OT/OL)**	Pump 3 Overload trip or Over Temp trip	Check voltage, pump clogging or wear
7	**P1 SEAL FAILURE**	Pump 1 seal failure	Check pump seal
8	**P2 SEAL FAILURE**	Pump 2 seal failure	Check pump seal
9	**P3 SEAL FAILURE**	Pump 3 seal failure	Check pump seal
10	**BACKUP FLOAT MODE**	Backup float mode is active (High float tripped)	Check transducer operation
11	**POWER/PHASE FAILURE**	Power loss or Phase loss to the control panel	Check incoming power and phase monitor
12	**XDCR OPEN ALARM**	Transducer signal is less than 4mA	Check transducer connection, check transducer and vent tube
13	**PUMP 1 HIGH CURRENT**	Pump amps higher than expected for time delay	Check voltage, pump clogging or wear
14	**PUMP 2 HIGH CURRENT**	Pump amps higher than expected for time delay	Check voltage, pump clogging or wear
15	**PUMP 3 HIGH CURRENT**	Pump amps higher than expected for time delay	Check voltage, pump clogging or wear
16	**PUMP 1 DRY RUN**	Pump amps lower than expected for time delay	Check transducer, check low level float, check pump
17	**PUMP 2 DRY RUN**	Pump amps lower than expected for time delay	Check transducer, check low level float, check pump
18	**PUMP 3 DRY RUN**	Pump amps lower than expected for time delay	Check transducer, check low level float, check pump
19	**PANEL INTRUSION**	The control panel door has been opened	
20	**LOW BATTERY**	The controller battery is low	Change battery with power on controller. Power cycle controller to reset screen indicator.

SETUP


Level
Flow
VFD
Amps
Sensor
System
Factory
Factory Use Only
Sensor
System
Sensor Setup
Level Transducer Setup
15.0 ft
Level Xducer Range
0.0 ft
Level Xducer Offset
The transducer range is the 20mA setpoint of your transducer.
Float
High
Lag 2
Lag
Lead
Low
Float
5.6 ft
System Setup
# of Pumps
Triplex
Pumping Mode
Empty
VFD Mode
Enabled
Lead Select
Auto
14:26:22
System Time
0
Access Password
01/16/15
System Date
Reset
ETM / CC Reset Screen
Pump Information
I/O Status & Programmable Outputs
VFD
Amps
VFD Control Setup
Frequency at Lag 2 Level
60 Hz
Start Frequency at Lag Level
55 Hz
Start Frequency at Start Level
50 Hz
Hold Time at 60Hz on Ramp Up (sec)
20
Set to Default
4.1 ft
Pump Amps Setup
Current Monitoring
Enabled
High Current Delay (mm:ss)
00:30
30.0 A
Pump 1 Amps Xducer Range
P1 High Current
15.0 A
30.0 A
Pump 2 Amps Xducer Range
P2 High Current
15.0 A
30.0 A
Pump 3 Amps Xducer Range
P3 High Current
15.0 A
Dry Run Protection Setup
Level
Flow
SIMULATE
On Setting
Off Setting
High Level
12.0 ft
Lag 2 Call Level
10.5 ft
4.5 ft
Lag Call Level
9.0 ft
4.5 ft
Lead Call Level
7.5 ft
4.5 ft
Low Level
3.0 ft
5.1 ft
Flow Calculation Menu
Cylindrical
Rectangular
Disable Flow Calc

SENSOR SETUP

The level transducer parameters are entered on this screen.



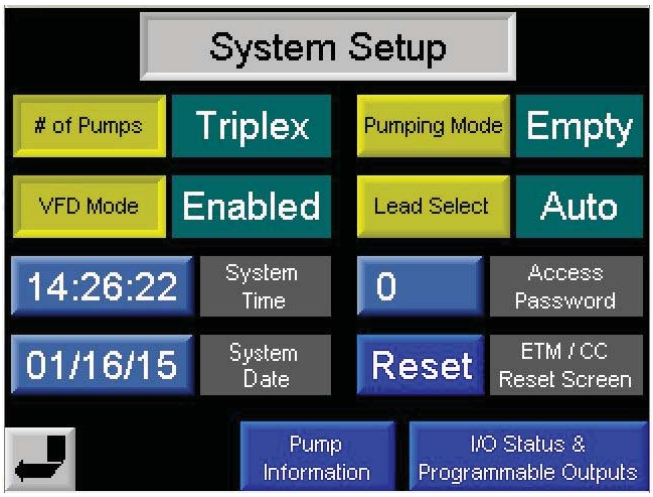
Level Transducer

To configure the controller to match the level transducer, touch the **Level Xducer Range** button. Using the pop-up keyboard, enter the maximum range value of the transducer. This is the water level at which the transducer will output 20mA.

Example: 0-10 psi range level transducer = 0-23.0 ft. (1 psi = 2.30 ft.) Set 20mA = 23.0 ft.
Some transducers are already calibrated in feet. (Max value for 20mA is 99.9 ft.)

When using a submersible pressure transducer, 0.0 ft. represents the level at the bottom of the transducer and not the wet well. If the transducer is mounted 2.0 feet off the bottom of the tank, set the Level Xducer Offset to: 2.0 ft.

SYSTEM SETUP



# of Pumps	Set the number of pumps controlled
VFD Mode	Enable or disable VFD speed control
System Time	Set this to the current time of day (24 hour form)
System Date	Set this to the current date
Pumping Mode	Empty (Pump Down application) or Fill (Pump Up application)
Lead Select[1]	P1, P2, P3 (if 3 pumps selected), or Auto
Access Password[2]	0= No password, 1-9999 password set

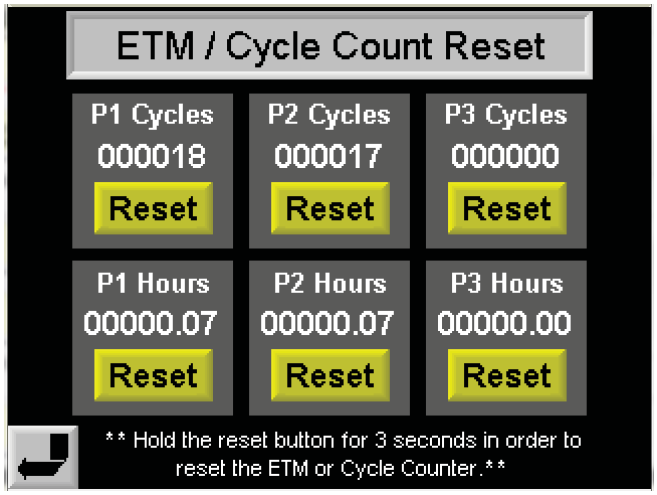
Press the yellow button for each mode to cycle through options.

Notes:

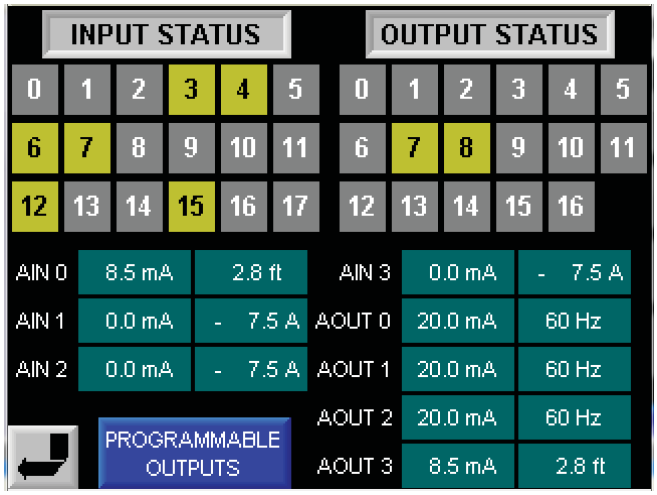
[1] The **Lead Select** button will only work if at least one of the HAND/OFF/AUTO selector switches in the control panel is set to the AUTO position. If **P1** is selected, it will start as the lead pump every time the lead pump is called to run. If the **Lead Select** is set to **Auto** (default), the lead pump will alternate every time the lead pump is called to run.

[2] Setting the password with a value from 1 to 9999 will prevent future access to the **Setup** menu. A password entry screen will be prompted prior to entering the **Setup** menu.

The Reset button opens a screen with options to reset individual counters and hour meters.

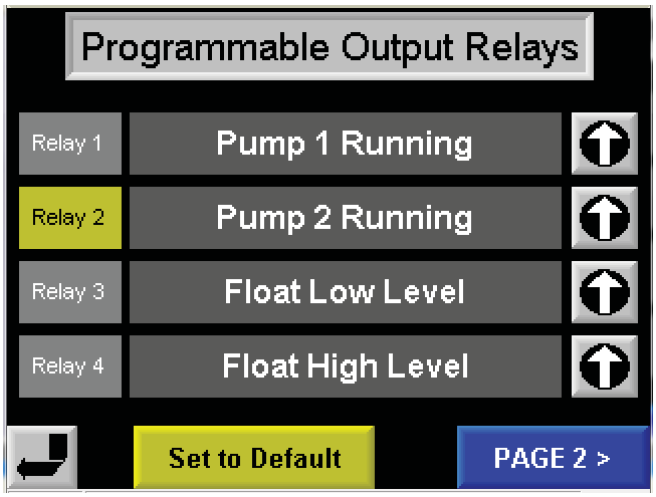


Pressing the I/O Status & Programmable Outputs button opens the **INPUT/OUTPUT STATUS** screen. This screen enables the user to monitor the status of all Inputs and Outputs of the controller. This is a very useful tool when troubleshooting.



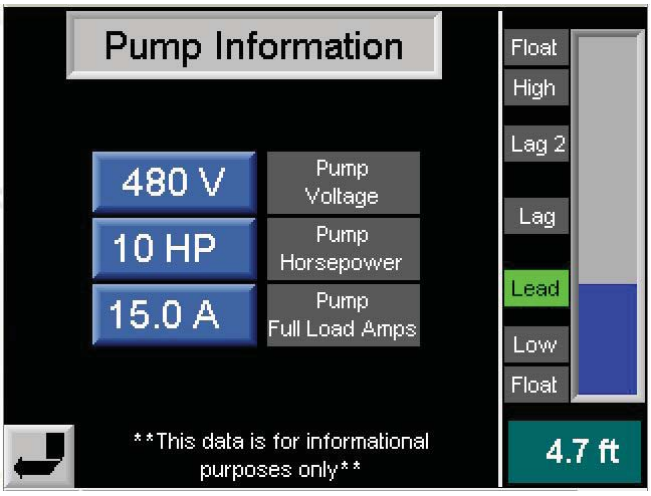
Pressing the PROGRAMMABLE OUTPUTS button opens the **Programmable Output Relays** screen. This screen enables the user to configure the operation of the relay outputs. Seven output relays are available and can be user programmed to activate based on the following conditions:

1. Pump 1 Running
2. Pump 2 Running
3. Pump 3 Running
4. Transducer Low Level
5. Transducer High Level
6. Float Low Level
7. Float High Level
8. Pump 1 Failure
9. Pump 2 Failure
10. Pump 3 Failure
11. Pump 1 Seal Failure
12. Pump 2 Seal Failure
13. Pump 3 Seal Failure
14. Backup Float Mode Active
15. Power/Phase Failure
16. Transducer Open Alarm
17. General Alarm

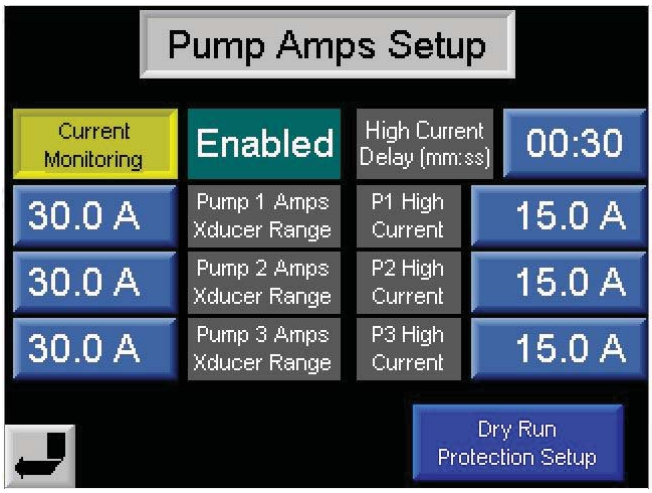


PUMP DATA SCREEN

The **Pump Data** screen is for information only. It is a record of the pump HP, Volts, and FLA. This data can be viewed remotely when connected to the PRIMEX® PUMP WATCH® cellular monitoring system.



PUMP AMPS SETUP



The Level View™ controller uses a current transducer for each pump. The measuring range of the current transmitter is typically listed on the transducer. The default unit has a 0-100A range.

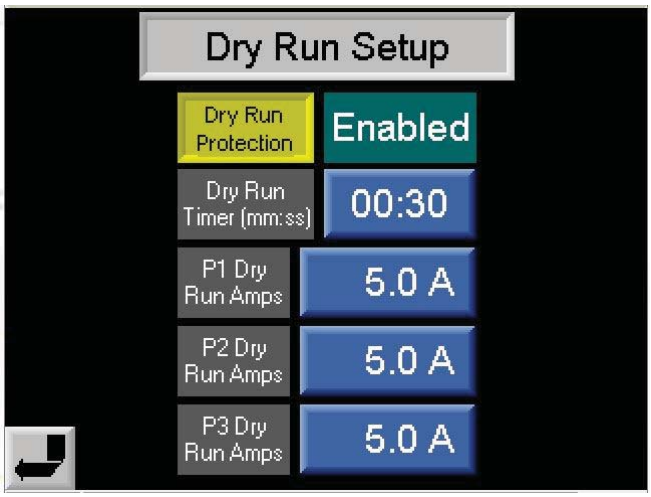
Current Transducers

To configure the controller to match the current transducer, touch the **Pump** X **Amp Range** button. Using the pop-up keyboard, enter the maximum range value of the transducer. This is the amp value at which the transducer will output 20mA.

High Current Monitoring

When **Enabled**, the **Current Monitoring** uses the pump amps measurement to determine whether a pump is overloading due to a clog, low voltage, or other changing conditions. Set this value 20% higher or more than the normal running amps. This function does not stop the pump, it only generates an alarm.

Dry Run Protection

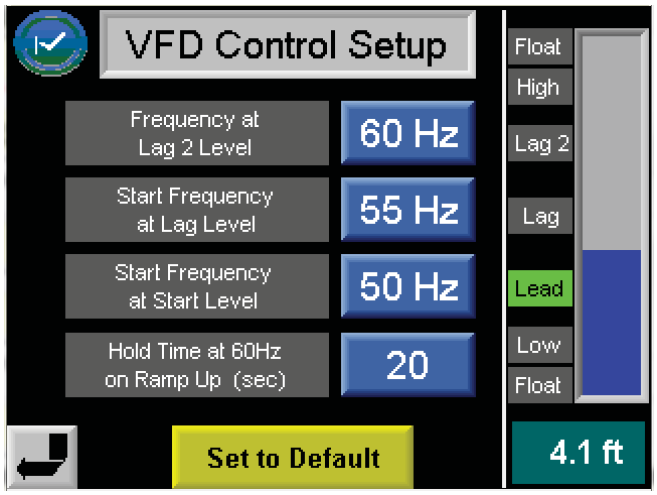


When **Enabled**, the **Dry Run Protection** uses the motor amps measurement to determine whether a pump is running dry (no load). For submersible pumps, set the **Pump Dry Run Amps** to 30% less than the amp draw during normal pumping operation. Please consult your pump manufacturer to confirm this value. If the amps drop below this value for longer than the **Dry Run Timer,** the controller will stop the pump and display a **Dry Run Fault**. The **Dry Run Timer** time is used to avoid nuisance tripping. If a pump trips on **Dry Run**, the next pump will be called to run. The **Dry Run Fault** automatically resets after two (2) minutes.

Note: If you are using VFDs, you must set the **Dry Run Amps** (A) value to 30% less of the normal running amps **at the minimum (lead start) frequency**.

VFD SETUP

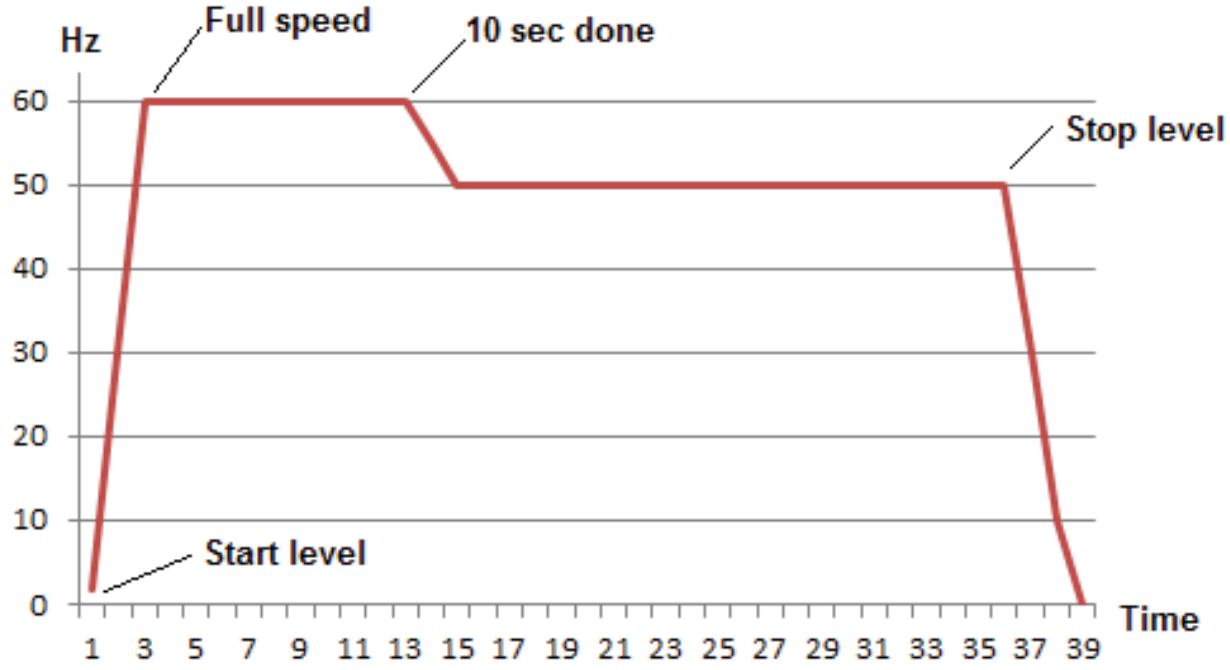
The Level View™ controller is capable of pump speed control based on level.



Hold Time at 60Hz on Ramp Up (sec): When the pump starts, it will automatically ramp up to full speed (60Hz) for the number of seconds set in this parameter. When the timer times out, the VFD will follow the speed curve set by the other parameters.

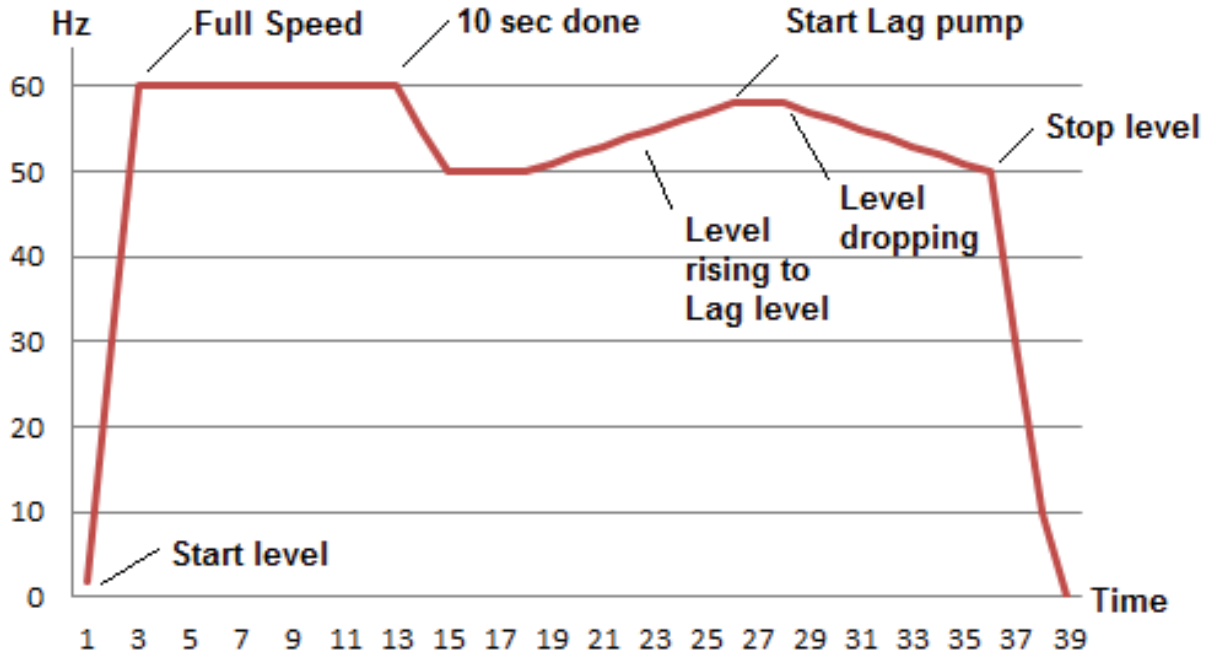
Start Frequency at Start Level: This parameter determines the pump speed at the Lead Pump ON Level. If the level does not rise above the Lead Pump ON level, the pump speed will not change. The pump will ramp down and stop as the level drops below the Lead Pump OFF level.

Example: Hold time = 10 sec, and Start Frequency = 50Hz



Start Frequency at Lag Level: This parameter sets the pump speed at the Lag Pump ON level. As the level rises above the Lag Pump ON level, the second pump starts and runs at the same speed as the lead pump until it reaches the Lag Pump OFF level and stops.

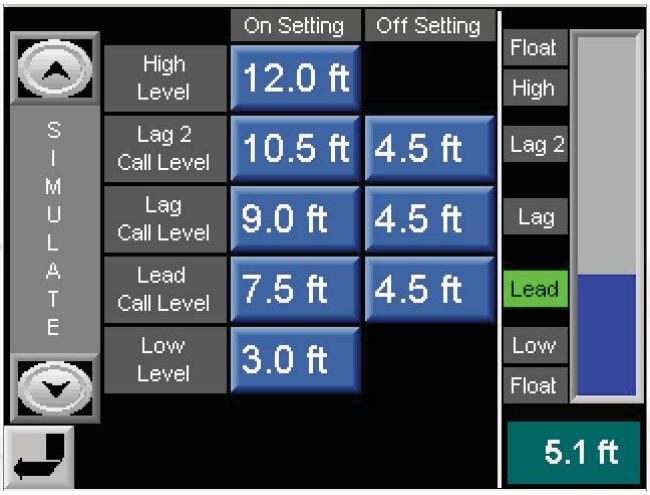
Example: Hold time = 10 sec, and Start Frequency = 50Hz, Start Frequency at Lag Level = 58Hz



Start Frequency at Lag 2 Level: This parameter sets the pump speed at the Lag 2 Pump ON level. As the level rises above the Lag 2 Pump ON level, the third pump starts and runs at the same speed as the lead + lag pump until it reaches the Lag 2 Pump OFF level and stops.

LEVEL SETUP

The Level Setup screen is where the level set-points can be monitored and modified.



To change any of the set-points, simply touch the display for the set-point and a keyboard will appear. Enter the new value using the keyboard and press the Return key. The new value entered will replace the previously displayed value. The following set-points can be modified from this screen:

Low Level	If the level falls below this set-point then the low level alarm will be active. This alarm condition will automatically reset once the level rises above this set-point.
Lead Call Level	**OFF:** When the level is pumped below this set-point, the **Lead** pump will turn off. **ON:** When the level rises above this level, the **Lead** pump will be called to start.
Lag Call Level	**OFF:** When the level is pumped below this set-point, the **Lag** pump will turn off. **ON:** When the level rises above this level, the **Lag** pump will be called to start.
Lag 2 Call Level	**OFF:** When the level is pumped below this set-point, the **Lag 2** pump will turn off. **ON:** When the level rises above this level, the **Lag 2** pump will be called to start. These set-points are only accessible in TRIPLEX pump operation mode.
High Level	When the level rises above this level, then a high alarm will be set. The High condition will reset 10 seconds after the level falls below this set-point.

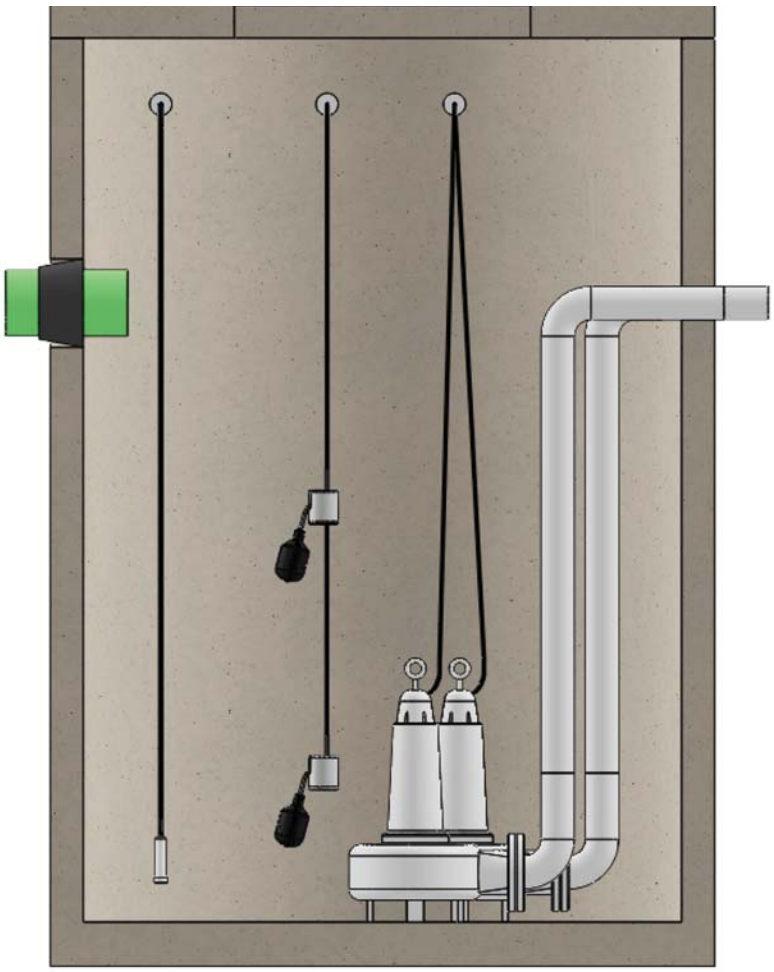
This screen also has two buttons which can be used to force the level reading in the controller either up or down. This is used to simulate the level rising or falling for testing. To enter Level Simulation mode, hold the up or down arrow for 5 seconds. If the **Up Simulate** button is pressed, the internal level in the controller will rise. This can be used to confirm that the pumps turn ON at the proper point. If the **Down Simulate** button is pressed, then the level will fall, confirming that the pumps turn OFF or that the low level will come on. Shortly after releasing the button (5 seconds) the system will return to normal and read the actual level. Use the **Return** button in the lower left corner of this screen to return to the **Setup** screen.

Back up float switch operation: Two back up floats are strongly recommended. They need to be wired to control the pumps independently of the Level View™ controller. The float inputs into the Level View™ controller are for alarm monitoring purposes only, not for pump control.

High Level Float: All pumps will run when activated until the level drops below the Low Level floats and will also activate the alarm beacon and horn. The High Level float switch is typically set above the High Level transducer set point.

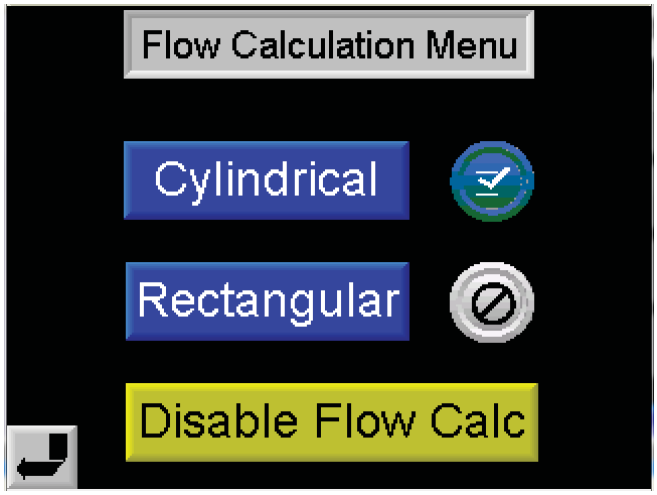
Low Level Float: If the level drops below the Low Level float switch, it will stop any pump operation in automatic mode. The purpose of the Low Level float switch is to protect the pumps against damage resulting from a dry run condition. The Low Level float switch is typically set below the Low Level transducer set point.

TRANSDUCER/FLOAT SWITCH INSTALLATION

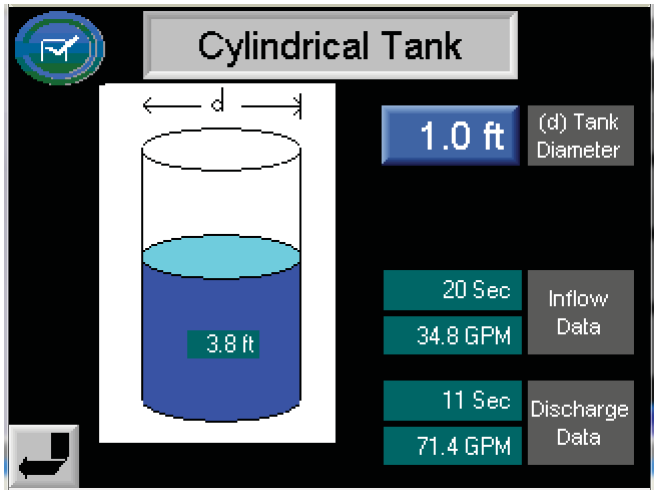


FLOW SETUP

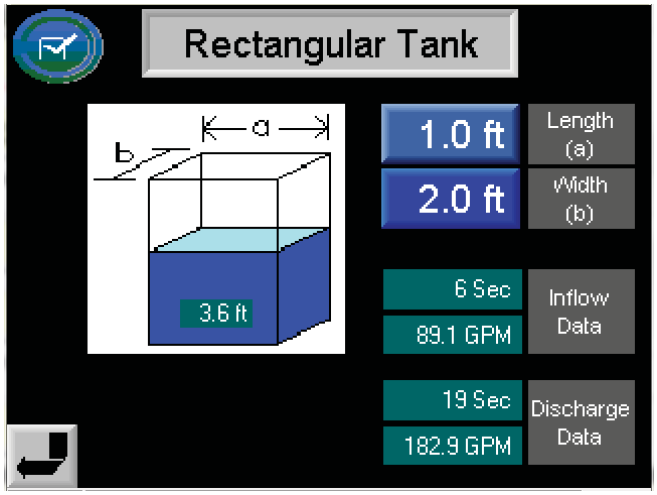
The controller will calculate the pump GPM using time and the water level. In order for the controller to do this, it must know the wet well configuration and dimensions. If the tank is cylindrical, press the circle next to the Cylindrical button to set a check mark. If the tank is rectangular, press the circle next to the Rectangular button to set a check mark. To disable flow calculation, press the Disable Flow Calc button to uncheck both well types. If the well is cylindrical, touch the Cylindrical button. If the well is rectangular, touch the Rectangular button.



If the tank is cylindrical, enter the tank diameter using the (d) tank diameter display.



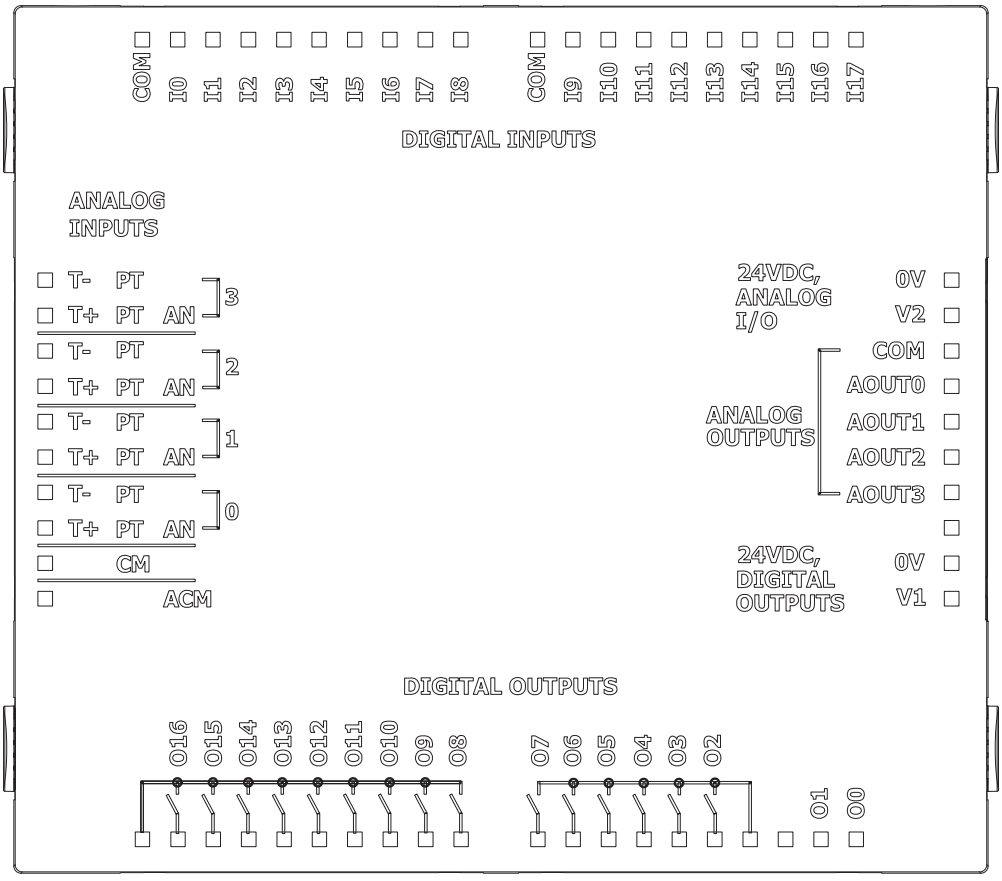
If the tank is rectangular, enter the tank dimensions using the (a) and (b) display buttons.

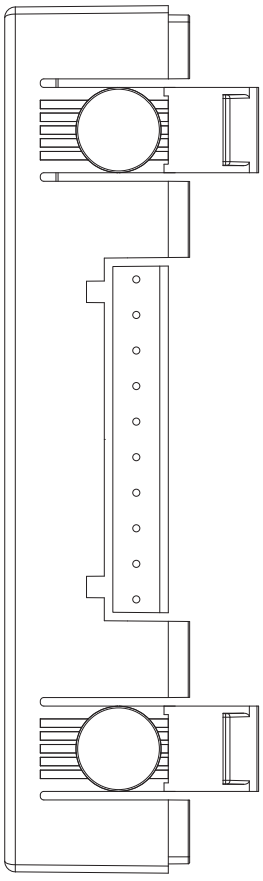


LEVEL VIEW™ POWER UP SCREEN (VERSION)

On power up, the screen will display the version of the program. Always have the version number ready when contacting the factory for service.

I/O TERMINAL CONFIGURATION





LEVEL VIEW™ I/O TABLE

DIGITAL INPUT TERMINALS		
INPUT	**TYPE**	**DESCRIPTION**
COM	0~8	INPUT COMMON (0~8)
I0	DIGITAL PNP	PUMP 1 RUNNING
I1	DIGITAL PNP	PUMP 2 RUNNING
I2	DIGITAL PNP	PUMP 3 RUNNING
I3	DIGITAL PNP	PUMP 1 FAULT*
I4	DIGITAL PNP	PUMP 2 FAULT*
I5	DIGITAL PNP	PUMP 3 FAULT*
I6	DIGITAL PNP	PUMP 1 AUTO
I7	DIGITAL PNP	PUMP 2 AUTO
I8	DIGITAL PNP	PUMP 3 AUTO
COM	9~17	INPUT COMMON (9~17)
I9	DIGITAL PNP	PUMP 1 SEAL FAIL
I10	DIGITAL PNP	PUMP 2 SEAL FAIL
I11	DIGITAL PNP	PUMP 3 SEAL FAIL
I12	DIGITAL PNP	LOW LEVEL FLOAT
I13	DIGITAL PNP	HIGH LEVEL FLOAT
I14	DIGITAL PNP	BACK UP FLOATS ACTIVE
I15	DIGITAL PNP	POWER/PHASE FAULT*
I16	DIGITAL PNP	ILLEGAL ENTRY
I17	DIGITAL PNP	GENERATOR FAULT
24 VDC PNP inputs *Normally closed, opens on fault		

DIGITAL OUTPUT TERMINALS		
INPUT	**TYPE**	**DESCRIPTION**
COM	NA	NO CONNECTION
O0	NA	NO CONNECTION
O1	NA	NO CONNECTION
COM	2~7	COMMON FOR OUTPUTS 2~7
O2	RELAY OUTPUT 2	CALL PUMP 1 (AUTO)
O3	RELAY OUTPUT 3	CALL PUMP 2 (AUTO)
O4	RELAY OUTPUT 4	CALL PUMP 3 (AUTO)
O5	RELAY OUTPUT 5	HIGH LEVEL TRANSDUCER
O6	RELAY OUTPUT 6	LOW LEVEL TRANSDUCER
O7	RELAY OUTPUT 7	GENERAL ALARM
O8	RELAY OUTPUT 8	GENERAL ALARM
O9	RELAY OUTPUT 9	PROGRAMMABLE RELAY 1
O10	RELAY OUTPUT 10	PROGRAMMABLE RELAY 2
O11	RELAY OUTPUT 11	PROGRAMMABLE RELAY 3
O12	RELAY OUTPUT 12	PROGRAMMABLE RELAY 4
O13	RELAY OUTPUT 13	PROGRAMMABLE RELAY 5
O14	RELAY OUTPUT 14	PROGRAMMABLE RELAY 6
O15	RELAY OUTPUT 15	PROGRAMMABLE RELAY 7
O16	N/A	NO CONNECTION
COM	8~16	
Output current 3A maximum per output (resistive load) 8A maximum total for common (resistive load) Rated voltage 250 VAC / 30 VDC		

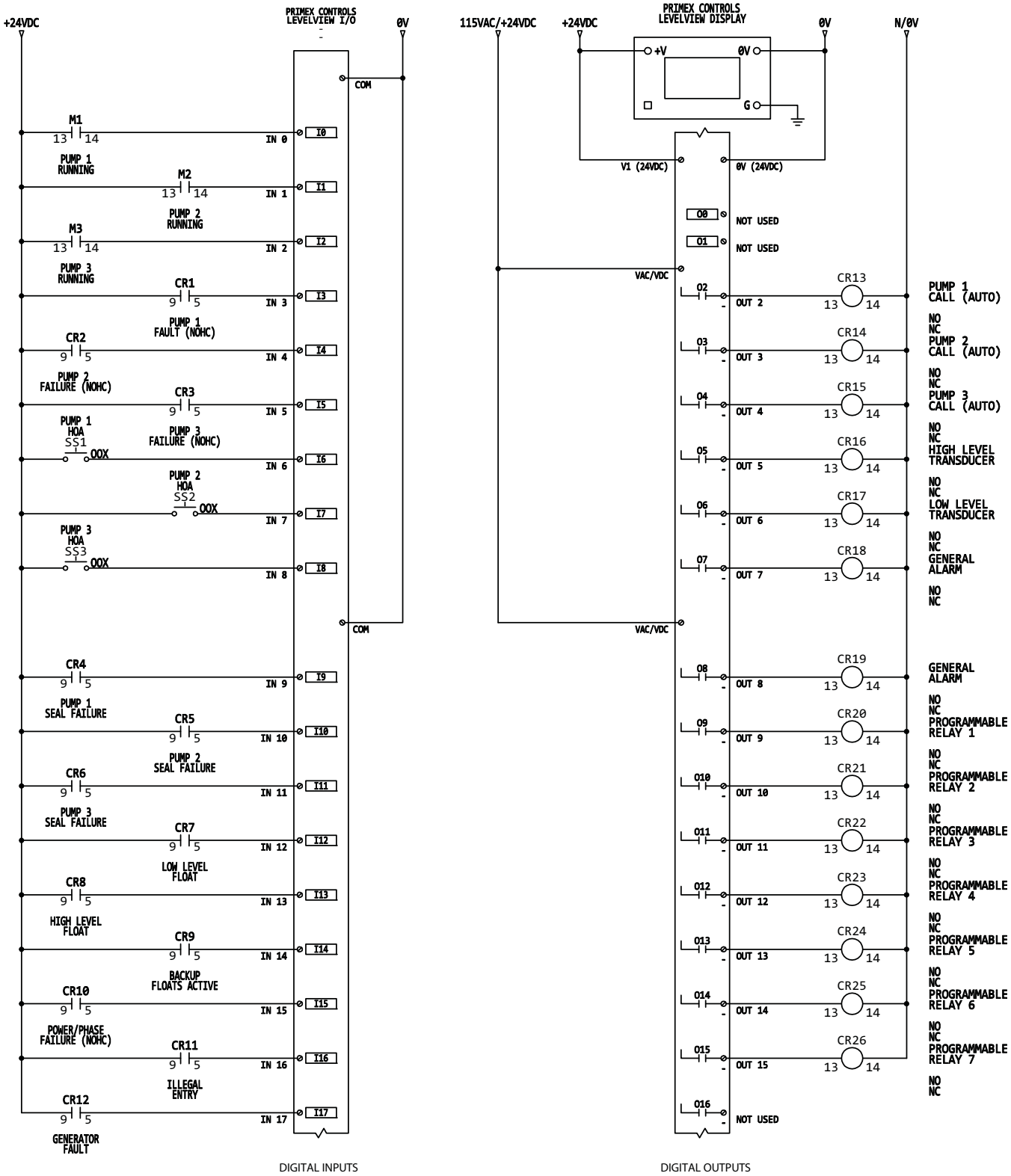
ANALOG INPUT TERMINALS			
	INPUT	**TYPE**	**DESCRIPTION**
	ACM	4-20mA Common	ANALOG COMMON
	CM	NA	NO CONNECTION
0	T+PT AN	4-20mA INPUT 0	LEVEL
	T-PT	NC	
1	T+PT AN	4-20mA INPUT 1	PUMP 1 AMPS
	T-PT	NC	
2	T+PT AN	4-20mA INPUT 2	PUMP 2 AMPS
	T-PT	NC	
3	T+PT AN	4-20mA INPUT 3	PUMP 3 AMPS
	T-PT	NC	
Resolution at 4-20mA 3277 to 16384 (13107 units).			

ANALOG OUTPUT TERMINALS		
INPUT	**TYPE**	**DESCRIPTION**
0V	ANALOG I/O POWER	0V
V2	ANALOG I/O POWER	24 VDC
COM	COMMON	ANALOG OUTPUT COMMON
AOUT0	4-20mA OUTPUT 0	PUMP 1 COMMAND SPEED
AOUT1	4-20mA OUTPUT 1	PUMP 2 COMMAND SPEED
AOUT2	4-20mA OUTPUT 2	PUMP 3 COMMAND SPEED
AOUT3	4-20mA OUTPUT 3	ADJ. LEVEL RETRANSMIT
Resolution 12 bit (4096 units)		

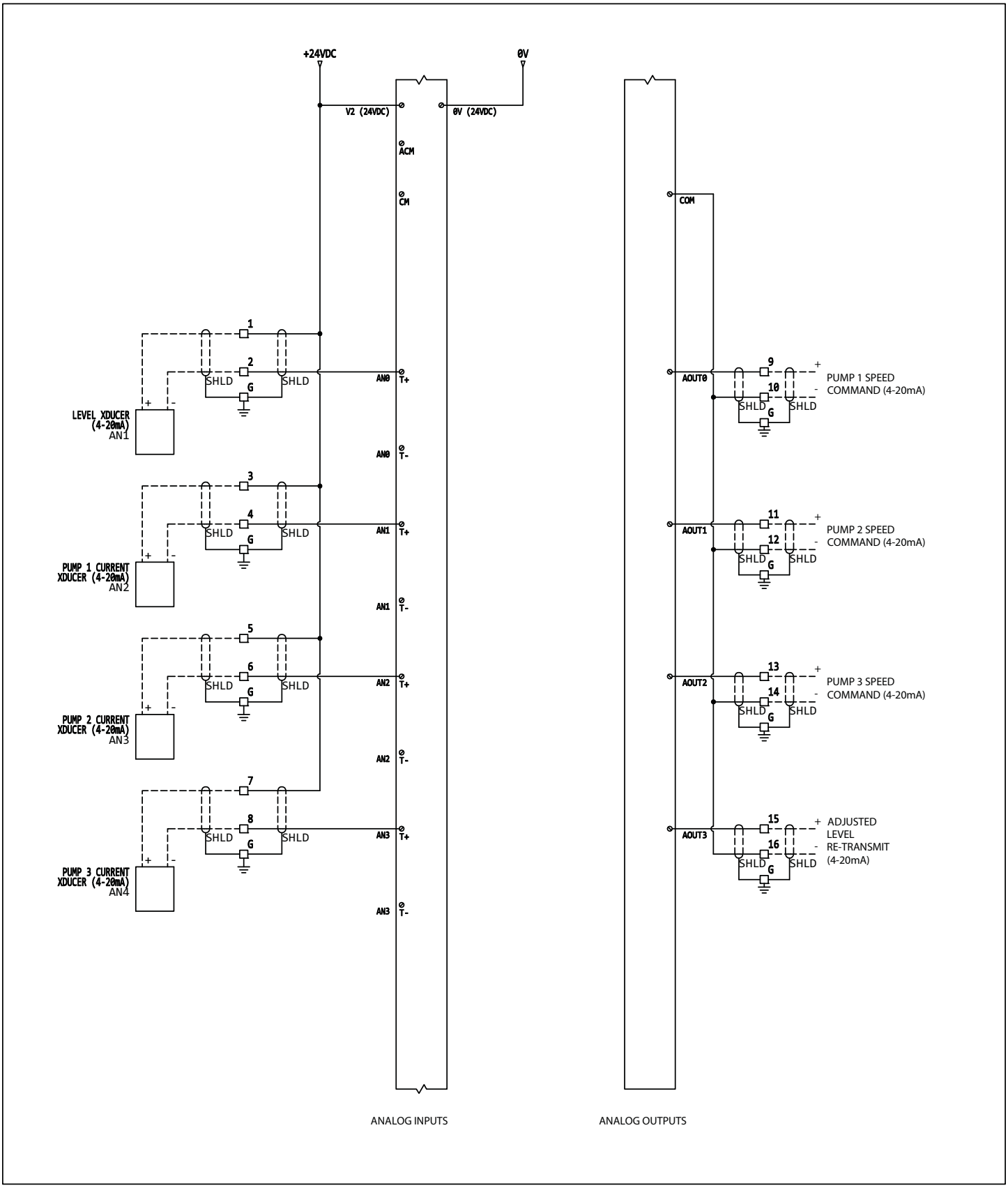
24 VDC OUTPUT TERMINALS		
INPUT	**TYPE**	**DESCRIPTION**
0V	DIGITAL OUTPUT POWER	0V
V1	DIGITAL OUTPUT POWER	24 VDC

POWER		
INPUT	**TYPE**	**DESCRIPTION**
+V	I/O MODULE POWER	24 VDC
0V	I/O MODULE POWER	0V
GND	I/O MODULE POWER	GROUND
Operating voltage 20.4 to 28.8 VDC Maximim current consumption: 400mA@24VDC		

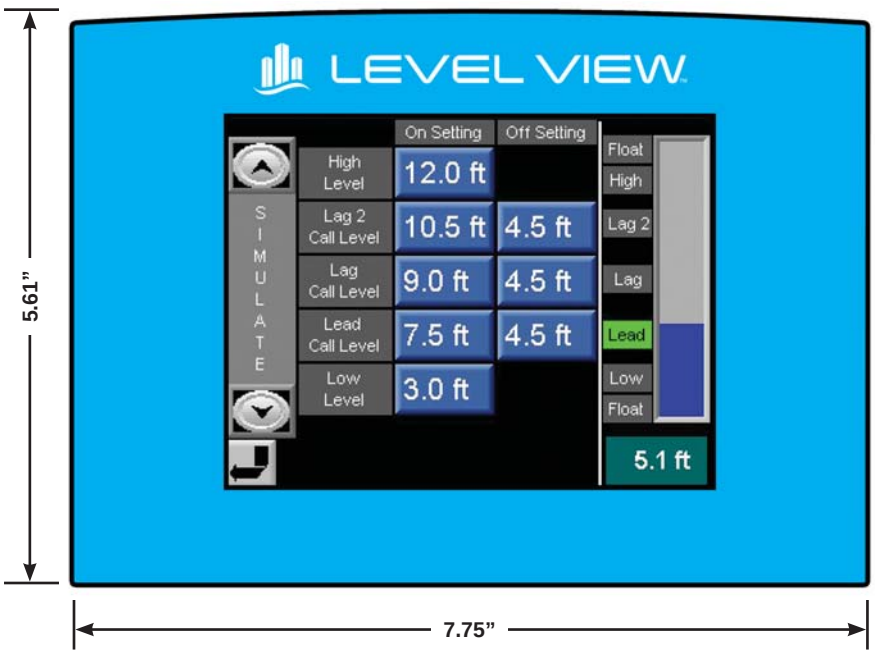
ELECTRICAL WIRING DIAGRAM

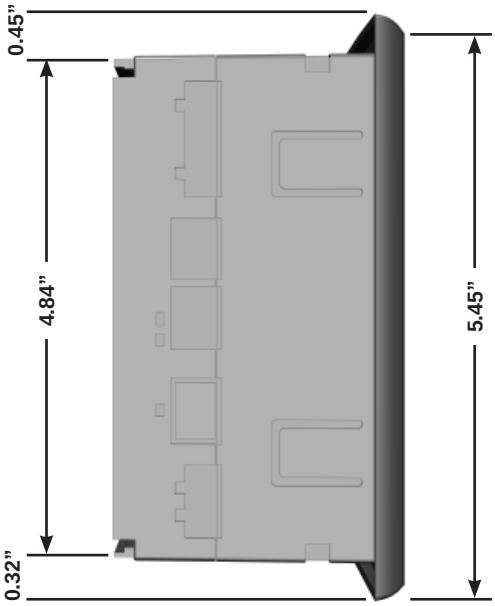


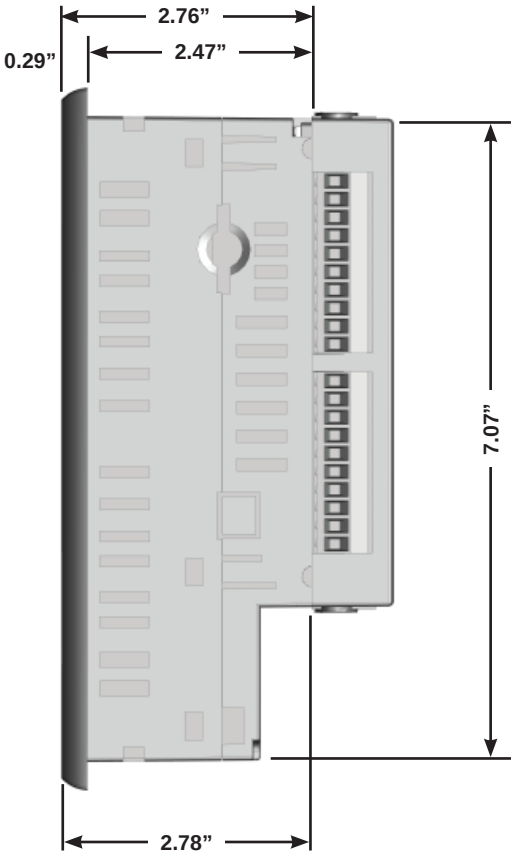
ELECTRICAL WIRING DIAGRAM



DIMENSIONS AND MOUNTING







DIP SWITCH SETTINGS

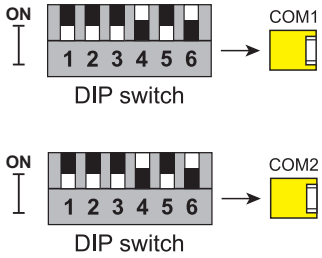
RS485 to RS232: Changing DIP Switch Settings

The ports are set to RS485 by factory default.
To change the settings, first remove the Snap-in I/O Module, if one is installed, and then set the switches according to the following table.

RS232/RS485: Factory Default Dip Switch Settings

The settings below are for each COM port.

	SWITCH SETTINGS					
	1	**2**	**3**	**4**	**5**	**6**
RS485	OFF	OFF	OFF	**ON**	OFF	**ON**
RS485 with termination**	**ON**	**ON**	OFF	**ON**	OFF	**ON**
****Causes the unit to function as an end unit in an RS485 network.**						



I/O MODULE JUMPERS

I/O Module jumper settings are programmed at the factory.

Analog Input jumper settings - Bottom of PCB Board

Set to 4-20mA Input

JUMPER	FUNCTION	POSITION	
		DEFAULT (UNI)	LEVEL VIEW™
3	ANALOG INPUT 0	A	A
4		A	B
5		A	B
6	ANALOG INPUT 1	A	A
7		A	B
8		A	B
9	ANALOG INPUT 2	A	A
10		A	B
11		A	B
12	ANALOG INPUT 3	A	A
13		A	B
14		A	B

Analog Output jumper settings - Top of PCB Board

Set to 4-20mA Output

JUMPER	FUNCTION	POSITION	
		DEFAULT (UNI)	LEVEL VIEW™
1	ANALOG OUTPUT 0	B	A
2	ANALOG OUTPUT 1	B	A
3	ANALOG OUTPUT 2	B	A
4	ANALOG OUTPUT 3	B	A

LEVEL VIEW™ CONTROLLER SETPOINTS LIST

STATION NAME:	
START UP DATE:	
CONTROLLER REV:	

	SENSOR SETUP	MIN	MAX	FACTORY SETTING	USER
	Level Transducer Range	0.0	99.9		
	Level Transducer Offset	0.0	99.9		
VFD CONTROL SETUP					
	Frequency at Lag 2 Level	0.0	60.0		
	Start Frequency at Lag Level	0.0	60.0		
	Start Frequency at Start Level	0.0	60.0		
	Hold Time at 60Hz on Ramp Up (sec)	0	59		
LEVEL SETUP					
	High Level ON	OFFSET	RANGE		
	Lag 2 Call Level ON	OFFSET	RANGE		
	Lag 2 Call Level OFF	OFFSET	RANGE		
	Lag Call Level ON	OFFSET	RANGE		
	Lag Call Level OFF	OFFSET	RANGE		
	Lead Call Level ON	OFFSET	RANGE		
	Lead Call Level OFF	OFFSET	RANGE		
	Low Level ON	OFFSET	RANGE		
SYSTEM SETUP					
	# of Pumps Select	DUPLEX	TRIPLEX		
	VFD Mode Enable	DISABLED	ENABLED		
	System Time	00:00:00	23:59:59		
	System Date	01/01/00	12/31/99		
	Pumping Mode Select	EMPTY	FILL		
	Lead Select	AUTO	P3		
	Access Password	0	9999		
AMPS SETUP					
	Current Monitoring Enable	DISABLED	ENABLED		
	Pump 1 Amps Current Xducer range	0.0	999.9		
	Pump 2 Amps Current Xducer range	0.0	999.9		
	Pump 3 Amps Current Xducer range	0.0	999.9		
	High Current Delay (mm:ss)	00:00	59:59		
	P1 High Current	0.0	RANGE		
	P2 High Current	0.0	RANGE		
	P3 High Current	0.0	RANGE		
	Dry Run Protection Enable	DISABLED	ENABLED		
	Dry Run Timer (mm:ss)	00:00	59:59		
	Pump 1 Dry Run Amps	0.0	999.9		
	Pump 2 Dry Run Amps	0.0	999.9		
	Pump 3 Dry Run Amps	0.0	999.9		

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